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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/658,907

09/11/2000

Kristopher T. Kohl

194-13026-CIP

4415

24923

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06/08/2004

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EXAMINER

KRISHNAMURTHY, RAMESH

ART UNIT

PAPER NUMBER

3753

DATE MAILED: 06/08/2004

31

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/658,907

Applicant(s)

KOHL ET AL.

Examiner

Ramesh Krishnamurthy

Art Unit

3753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 - 20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

This office action is responsive to communications filed 03/30/2004.

1. A request for continued examination under 37 CFR 1.114 was filed in this application after appeal to the Board of Patent Appeals and Interferences, but prior to a decision on the appeal. Since this application is eligible for continued examination under 37 CFR 1.114 and the fee set forth in 37 CFR 1.17(e) has been timely paid, the appeal has been withdrawn pursuant to 37 CFR 1.114 and prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on 12/30/2003 has been entered.

Claims 1 – 20 are pending.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Art Unit: 3753

4. Claims 1, 2, 5 – 8, 10, 14, 16 - 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Spivey (US 4,635,723) in view of Merritt, Jr. et al. (US 4,721,158) and further in view of Hensley (US 4,354,553).

Spivey discloses a system for a controlled injection of corrosion inhibiting additive to a production well (60), the system comprising a source of additive (13), a pump (30), a flow meter (35, 39) that generates appropriate signals via transmitters (36, 40) to a microprocessor based first controller (53) that controls a solenoid operated valve (46) to ensure a desired amount of additive to be injected into the well (60). The controller (53) needs to be programmed (Col. 4, lines 51 – 55) which presumably involves an operator and thus via suitable programming the system is inherently capable of being manually overridden with previously programmed values.

The patent to Spivey discloses the claimed invention with the exception of (a) having a second controller that remotely controls the first controller to deliver a desired amount of additive into the well and (b) the system controlling a plurality of well bores.

Merritt, Jr. et al. discloses a control system wherein a remote controller (40) controls a first controller (35) to deliver a desired amount of additive into the well. Merritt, Jr. et al. discloses that it is known in the art to set the flow rate of the additive to be within a predetermined range and to adjust the flow rate if the measured flow rates fall outside of the set range (Col. 4, lines 35 – 56). Merritt, Jr. discloses details of controlling a plurality of well bores.

It would have been obvious at the time the invention was made to one of ordinary skill in the art to (a) have added a second controller at a remote location to the system

Art Unit: 3753

of Spivey to be able to control the first controller from a remote location to deliver a desired amount of additive into the well, and (b) adapt the flow control/delivery system to work with a plurality of wells as recognized by Merritt, Jr. et al.

Also, the onsite controller (35) has associated with it, a database management system comprising computer programs and historical performance data (col. 4 in Merritt, Jr. et al.) that could be easily shared with the second controller (40). Thus, the limitation of the database management system being associated with the second controller as recited in claim 8 is merely a design choice over those features disclosed in the combination of Spivey and Merritt, Jr. et al. that provides no new and / or unexpected results nor solves any stated problem.

The system according to Spivey – Merritt, Jr. et al. combination as set forth above discloses the claimed limitations with the exception of supplying the additive such that its concentration in the formation fluid is within the range of 1 ppm to about 10,000 ppm. The patent to Hensley discloses that it is known in the art (see Col. 5, example 1) to use additives that result in an additive concentration in the formation fluid of about 230 ppm (which is well within the range claimed) to achieve desired corrosion inhibition. It would have been obvious to one of ordinary skill in the art at the time the invention was made to supply the additive such that its concentration in the formation fluid is within the range of 1 ppm to about 10,000 ppm for the purpose of achieving desired corrosion inhibition.

It is also noted that the Spivey – Merritt, Jr. et al. - Hensley combination as set forth above necessarily performs the method recited in claims 16 – 18 in its usual and normal operation.

5. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over the Spivey – Merritt, Jr. et al. - Hensley combination as applied to claims 1, 2, 5 – 8, 10, 14, 16 - 18 above, and further in view of Scarpa et al. (US 5,992,230).

The system according the combination of Spivey, Merritt, Jr. et al. and Hensley as set forth above, discloses all the claimed features with the exception of explicitly disclosing the flow-measuring device to be a positive displacement flow meter.

Scarpa et al. discloses (Col. 1, lines 12 – 21) that positive displacement flow meters have been successfully used in petrochemical industry since they provide reliable measurement accuracy and because their calibration does not vary with the viscosity of the fluid being metered.

It would have been obvious to one ordinary skill in the art at the time the invention was made to have provided in the combination of Spivey, Merritt, Jr. et al. and Hensley, a positive displacement flow meter as the flow measuring device since, as recognized by Scarpa et al., positive displacement flow meters have been successfully used in petrochemical industry since they provide reliable measurement accuracy and because their calibration does not vary with the viscosity of the fluid being metered.

6. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over the Spivey – Merritt, Jr. et al. - Hensley combination as applied to claims 1, 2, 5 – 8, 10, 14, 16 - 18 above, and further in view of Tubel et al. (US 5,706,896).

The system according the combination of Spivey, Merritt, Jr. et al. and Hensley as set forth above, discloses all the claimed features with the exception of having the second remote controller being adapted to communicate with a plurality of computers over a network. The patent to Tubel et al. discloses (Fig. 4) that it is known in the art to employ a host computer ((10, Fig. 4) that is adapted to communicate with a plurality of computers over a network for the purpose of controlling wells located over a plurality of platforms. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in the system according to the combination of Spivey, Merritt, Jr. et al. and Hensley a host computer that is adapted to communicate with a plurality of computers over a network for the purpose of controlling wells located over a plurality of platforms as recognized by Tubel et al..

7. Claims 11, 12, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Spivey – Merritt, Jr. et al. - Hensley combination as applied to claims 1, 2, 5 – 8, 10, 14, 16 - 18 above, and further in view of Hayatdavoudi (US 4,665,981).

The system according the combination of Spivey, Merritt, Jr. et al. and Hensley as set forth above discloses all the claimed features with the exception of having a sensor measuring a characteristic of the formation fluid and altering the supply of a selected additive in response to the measured characteristic. The patent to Hayatdavoudi discloses that it is known in the art to employ a sensor (38) for the purpose of monitoring the corroding property of the formation fluid and the measured characteristic is used to alter the supply of the additive from the reservoir (56). It would

Art Unit: 3753

have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in the system according the Spivey-Merritt, Jr. et al. – Hensley combination a sensor for measuring a characteristic of the formation fluid and altering the supply of a selected additive in response to the measured characteristic for the purpose of selectively controlling the injection of the additive as recognized by Hayatdavoudi.

It is also noted that the Spivey – Merritt, Jr. et al. – Hensley - Hayatdavoudi combination as set forth above is capable of performing the method recited in claims 19 and 20.

8. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over the Spivey – Merritt, Jr. et al. – Hensley combination as applied to claims 1, 2, 5 – 8, 10, 14, 16 - 18 above, and further in view of Pearson (US 4,901,563).

The system according the combination of Spivey, Merritt, Jr. et al. and Hensley as set forth above discloses all the claimed features with the exception of having redundant flow control devices that are controlled by an onsite controller. The patent to Pearson discloses that it is known in the art to employ redundant flow control devices (36) controlled by an onsite controller (54) for the purpose of obtaining assured supply of additive into the well. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in the system according to the Spivey -Merritt, Jr. et al. - Hensley combination redundant flow control devices for the purpose of obtaining assured supply of the additive into the well as recognized by Pearson.

9. Claims 3 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Spivey – Merritt, Jr. et al. - Hensley combination as applied to claims 1, 2, 5 – 8, 10, 14, 16 - 20 above, and further in view of Johnson et al. (WO 98/57030).

The system according the combination of Spivey, Merritt, Jr. et al. and Hensley as set forth above, discloses all the claimed features with the exception of having injection of additives at pre-determined depths. The published disclosure of Johnson et al. discloses (Fig. 3) that it is known in the art to employ injection of additive at predetermined depths for the purpose of achieving desired properties of the formation fluid. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in the system according to the combination of Spivey, Merritt, Jr. et al. and Hensley, means for injecting the additive at a pre-determined depth for the purpose of achieving desired properties of the formation fluid as recognized by Johnson et al..

It is noted that Johnson et al. discloses (Fig. 6) the injection of additives into a surface-processing unit in addition to injection into the wellbore. Such surface treatment units provide further treatment of the produced fluid such as separation of water in emulsion from oil and gas, etc.

10. The declaration under 37 CFR 1.132 filed 03/30/2004 is insufficient to overcome the rejection of claims based upon the combination of Spivey, Merritt, Jr. et al. and Hensley as set forth in the last Office action because this declaration by Mitch Means does not set forth a specific nexus between the broadest claim(s) of the apparatus and the asserted commercial success. Merely reiterating the claim verbatim and including a

general statement that the device sold includes all the features recited in the claims fails to adequately demonstrate the particulars of the claimed embodiment that renders it commercially successful.

11. The declaration under 37 CFR 1.132 filed 12/30/2003 and 03/11/2004 is insufficient to overcome the rejection of claims based upon the combination of Spivey, Merritt, Jr. et al. and Hensley as set forth in the last Office action because this declaration by Mitch Means does not set forth a specific nexus between the broadest claim(s) of the apparatus and the asserted commercial success of the Sentry System.

12. The declaration under 37 CFR 1.132 by Mitch Means filed 03/11/2004, concerning the positive displacement flow meter is moot in view of the new grounds of rejection of claim 4 set forth above.

13. In view of the foregoing, when all of the evidence is considered, the totality of the rebuttal evidence of nonobviousness fails to outweigh the evidence of obviousness.

Response to specific Arguments

Applicant's argument concerning the applicability of Merritt, Jr. et al. to the claims of the instant invention in that the reference of Merritt, Jr. et al. is primarily concerned with "secondary recovery" is unpersuasive. Merritt, Jr. et al. discloses a fluid injection control system for controlling the injection of fluids –which could include (Col. 3, lines 21 – 24) a variety of chemicals. For controlling the injection of such fluids, Merritt, Jr. et al. discloses (Col. 3, line 67 – Col. 4, line 4) the use of a host computer i.e. a second remote controller for (a) monitoring purposes, (b) application program alteration purposes such as changing desired flow rates, etc. Just as the device claimed by the

applicants adds fluid to the well bore, so too does the device of Merritt, Jr. et al., by adding an additive, as at 12, to the formation fluid. While "flooding" and "artificial lift" may be mentioned, it is clear that fluid at 12 is added to the wellbore production fluid. Such added fluid clearly treats the wellbore fluid as an additive would. Thus the Merritt, Jr. et al. reference is in the field of applicant's endeavor (i.e. injection of additive into a well) and is also pertinent to the particular problem with which the applicant is concerned, that is, the use of a second remote controller for communicating with a first controller to transmit any desired changes in operational parameters.

Applicant's arguments concerning the turbine meter of Merritt, Jr. et al. not being a positive displacement flow meter have been rendered moot by the new grounds of rejection of claim 4.

Applicant's arguments concerning the commercial success via declarations by Mitch Means does not set forth a specific nexus between the broadest claim(s) of the apparatus and the asserted commercial success. Merely reiterating the claim verbatim and including a general statement that the device sold includes all the features recited in the claims fails to adequately demonstrate the particulars of the claimed embodiment that renders it commercially successful.

Applicant's arguments concerning the "Long felt need" of the instant invention have been carefully considered. Arguments pertaining to the maintenance of the patent to Spivey are speculative at best and are essentially irrelevant to the applicability of Spivey as a valid reference in the rejections set forth in the office action. As for the article in Hart's E&P magazine, it is clear that (a) the SentryNet system is one of the

Art Unit: 3753

approaches to the problem of remote monitoring and control of chemical delivery in production systems and (b) the article is primarily directed at the SentryNet systems of the assignee of the instant application. However any apparent nexus between the SentryNet system mentioned in the article and the claims in the instant application are to be found in the declarations of Mitch Means. The Declarations by Mitch Means do not set forth a specific nexus between the broadest claim(s) of the apparatus and the apparently successful performance of the SentryNet system mentioned in the E&P article. Merely reiterating the claim(s) verbatim and including a general statement that the device sold includes all the features recited in the claim(s) fails to adequately demonstrate the particulars of the claimed embodiment that may have contributed to its successful performance.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ramesh Krishnamurthy whose telephone number is (703) 305 - 5295. The examiner can normally be reached on Monday - Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Scherbel, can be reached on (703) 308 - 1272. The fax phone number for the organization where this application or proceeding is assigned is (703) 872 - 9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308 - 0861.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Ramesh Krishnamurthy
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